



PTO/SB/08A (08-03)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Complete if KnownSheet 1 of 2

Application Number	10/723,574
Filing Date	11/26/2003
First Named Inventor	Ba-Zhong Shen, Ph.D.
Art Unit	2133
Examiner Name	Albert Decady
Attorney Docket Number	BP3134

U. S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
SAC		US- 6,567,465 B2	05/20/2003	Yuri Goldstein, et al.	n/a
SAC		US- 6,430,233 B1	08/06/2002	Douglas M. Dillon, et al.	n/a
SAC		US- 6,633,856 B2	10/14/2002	Tom Richardson, et al.	n/a
SAC		US- 6,473,010 B1	10/29/2002	Andrei Vityaev, et al.	n/a
SAC		US- 4,295,218	10/13/1981	Robert M. Tanner	n/a
SAC		US- 3,665,396	05/23/1972	George David Forney, Jr.	n/a
SAC		US- 3,542,756	11/24/1970	Robert Gray Gallager	n/a
SAC		US- 2003/0104788 A1	06/05/2003	Sungwook Kim	n/a
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T ⁶
		Country Code ³ *Number ⁴ *Kind Code ⁵ (if known)				

Examiner Signature		Date Considered	6-21-06
-----------------------	--	--------------------	---------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Complete if Known

Application Number 10/723,574

Filing Date 11/26/2003

First Named Inventor Ba-Zhong Shen

Art Unit 2133

Examiner Name Albert Decady

Sheet 2 of 2

Attorney Docket Number BP3134

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
S-A-C		R. Gallager, Low-Density Parity-Check Codes, Cambridge, MA: MIT Press, 1963	
S-A-C		M. Luby, M. Mitzenmacher, A. Shokrollahi, D. Spielman, and V. Stemann, "Practical loss-resilient codes," 1997.	
S-A-C		T. J. Richardson and R. L. Urbanke, "The capacity of low-density parity-check code under message-passing decoding," IEEE Trans. Inform. Theory, Vol. 47, pp. 599-618, Feb. 2001	
S-A-C		E. Eleftheriou and S. Olcer, "Low-Density Parity-Check Codes for Digital Subscriber Lines," 0-7803-7400-2/02, IEEE, 2002, pp. 1752-1757.	

Examiner
SignatureDate
Considered

6-21-06

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Complete if Known	
Application Number	10/723,574
Filing Date	11/26/2003
First Named Inventor	Ba-Zhong Shen, Ph.D.
Art Unit	2133
Examiner Name	Albert Decady
Attorney Docket Number	BP3134

[illegible][illegible]

Examiner Signature		Date Considered	6-21-06
-----------------------	---	--------------------	---------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.



PTO/SB/08B (08-03)
Approved for use through 07/31/2006. OMB 0551-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 2 of 2

Complete if Known

Application Number	10/723,574
Filing Date	11/26/2003
First Named Inventor	Ba-Zhong Shen, Ph.D.
Art Unit	2133
Examiner Name	Albert Decady
Attorney Docket Number	BP3134

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
SAC		XIAO-YU HU; ELEFThERIOU, E.; ARNOLD, D.-M.; DHOLAKIA, A.: "Efficient Implementations of the Sum-Product Algorithm for Decoding LDPC Codes" GLOBAL TELECOMMUNICATIONS CONFERENCE, 2001. GLOBECOM '01. IEEE, vol. 2, November 29, 2001 (11/29/2001), pages 1036-1036E. XP002288249 "the whole document"	
SAC		RAVI NARAYANASWAMI: "Coded Modulation with Low Density Parity Check Codes" June 2001 (2001-06), TEXAS UNIVERSITY, US, XP002286262, page 6-page 12; page 13-page 24	
SAC		MITTELHOLZER T ET AL: "Reduced-complexity decoding of low density parity check codes for generalized partial response channels" IEEE TRANSACTIONS ON MAGNETICS, IEEE INC. NEW YORK, US, vol. 37, no. 2 pt1, March 2001 (2001-03), pages 721-728, XPO02177074 ISSN: 0018-9464 "the whole document"	

Examiner Signature 	Date Considered 6-21-06
--	-------------------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.



PTO/SB/08B (08-03)
Approved for use through 07/31/2006. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Institute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Complete if Known

Application Number	10/723,574
Filing Date	11/26/2003
First Named Inventor	Ba-Zhong Shen, Ph.D.
Art Unit	2133
Examiner Name	n/a
Attorney Docket Number	BP3134

Sheet	2	of	2
-------	---	----	---

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
SAC		WADAYAMA 1: "A CODED MODULATION SCHEME BASED ON LOW DENSITY PARITY CHECK CODES" IEICE TRANSACTIONS ON FUNDAMENTALS OF ELECTRONICS, COMMUNICATIONS AND COMPUTER SCIENCES, INSTITUTE OF ELECTRONICS INFORMATION AND COMM. ENG. TOKYO, JP, vol. E84A, no. 10, October 2001 (2001-10), pages 2523-2527, XPO01107784 ISSN: 0916-8508 * the whole document *	
SAC		MITTELHOLZER T ET AL: "Reduced-complexity decoding of low density parity check codes for generalized partial response channels" IEEE TRANSACTIONS ON MAGNETICS, IEEE INC. NEW YORK, US, vol. 37, no. 2, pt1, March 2001 (2001-03), pages 721-728, XP002177074 ISSN: 0018-9464 * the whole document *	

Examiner Signature		Date Considered	6-21-06
--------------------	--	-----------------	---------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.